



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/829,616

04/22/2004

Roshdy George S. Barsoum

96,151

7327

38092

7590

09/08/2005

OFFICE OF COUNSEL, CODE 004

NAVAL SURFACE WARFARE CENTER, CARDEROCK DIVISION

9500 MACARTHUR BLVD.

WEST BETHESDA, MD 20817

EXAMINER

GUTMAN, HILARY L

ART UNIT

PAPER NUMBER

3612

DATE MAILED: 09/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/829,616

Applicant(s)

S. BARSOUM ET AL.

Examiner

Hilary Gutman

Art Unit

3612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 21-28 is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-17 is/are rejected.
- 7) ☒ Claim(s) 3 and 18-20 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 April 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/4/04; 10/18/04 and 2/9/05
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 210, 220, 200, 200W, and 200F. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to because in Figure 11, the lead line for number 220W is not apparently pointing to the steel plate. Also in Figure 11, the lead line for 210W is not pointing to the elastomeric material (see marked-up copy, hereto attached). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and

Art Unit: 3612

appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to because in Figure 5 the elastomeric material "210C" is not sandwiched between two rigid materials as discussed at the top of page 12 in the disclosure. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will

Art Unit: 3612

be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

4. The disclosure is objected to because of the following informalities:

On page 11, [0032], line 3, "10" should be "100".

On page 11, [0032], line 6, "10" should be "100".

On page 12, line 3, "10" should be "100". Also the top of page 12 is unclear and is not apparently shown in the drawing figures since an elastomeric material "210C" is not sandwiched between two rigid materials as discussed in the specification. Appropriate correction is required.

Claim Objections

5. Claims 5, 8, 12, 14, and 21 are objected to because of the following informalities:

In claim 5, on line 2, "a said" should be "said".

In claim 8, lines 3-4, "a said" should be "said".

In claim 12, line 2, "a said" should be "said".

In claim 14, line 3, "a said" should be "said".

In claim 21, line 5, "a said" should be "said".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

Art Unit: 3612

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 4-11 and 14-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 4 recites the limitation "said elastomeric layer" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim 5 recites the limitations "a three-layer material system" in line 8, "said non-elastomeric layer" in line 9, and "said elastomeric layer" in lines 9-10. There is insufficient antecedent basis for these limitations in the claim.

Claim 6 recites the limitation "an impacting event" in line 5. There is insufficient antecedent basis for this limitation in the claim.

Claim 9 recites the limitation "an impacting event" in line 5. There is insufficient antecedent basis for this limitation in the claim.

Claim 11 recites the limitation "an impacting event" in line 5. There is insufficient antecedent basis for this limitation in the claim.

Claim 14 recites the limitation "a sandwich construction" in line 9. There is insufficient antecedent basis for this limitation in the claim.

Claim 15 recites the limitations "said sandwich constructions" in lines 2 and 3. There is insufficient antecedent basis for these limitations in the claim.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-2, 12-13, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Ladika et al.

Ladika et al. (5,663,520) inherently disclose a method for augmenting a wheeled vehicle in order to enhance its occupant protection capability, said vehicle including a cabin and an undercarriage, said undercarriage including an undercarriage portion situated beneath said cabin, said undercarriage portion including a pair of floorboard portions and a central portion intermediate said floorboard portions (Figure 2), each said floorboard portion being at least substantially characterized by structural continuity, said method comprising covering each said floorboard portion with an elastomeric layer 64, 90 and a non-elastomeric layer 50 so that said elastomeric layer is interposed between said floorboard portion and said non-elastomeric layer, wherein with respect to each said floorboard portion the combination including said floorboard portion and its associated said elastomeric layer and its associated said non-elastomeric layer essentially represents a three-layer material system, said floorboard portion and said non-elastomeric layer each being more rigid than said elastomeric layer.

With regard to claim 2, each said three-layer system effects at least one dissipative mechanism in response to an impacting event, said at least one dissipative mechanism including constrained layer damping.

With regard to claim 12, said vehicle further including two pairs of axial wheels and two pairs of non-horizontal wheel wells, each said wheel well being associated with a said wheel, each said wheel well being at least substantially characterized by structural continuity, said method further comprising covering each said wheel well with an elastomeric layer 90 and a non-elastomeric layer so that said elastomeric layer is interposed between said wheel well and said non-elastomeric layer, wherein with respect to each said wheel well the combination of said wheel well and its associated said elastomeric layer and its associated said non-elastomeric layer represents a three-layer material system, said wheel well and said non-elastomeric layer each being more rigid than said elastomeric layer (Figures 1 and 4).

With regard to claim 13, each said three-layer system effects at least one dissipative mechanism in response to an impacting event, said at least one dissipative mechanism including constrained layer damping.

For claim 17, Ladika et al. disclose an occupant-protective understructure suitable for incorporation as part of a wheeled vehicle, said wheeled vehicle having a front vehicle end, a rear vehicle end, a left vehicle side, and a right vehicle side, said understructure comprising: two separated, at least approximately coplanar floor components, said two floor components being a left floor component and a right floor component, said left floor component having a left floor component front end and a left floor component rear end, said right floor component having a right floor component front end and a right floor component rear end, each said floor component including two rigid layers and an elastomeric layer sandwiched therebetween; and four wheel bulkhead components each for placement proximate a wheel of said vehicle, said four wheel bulkhead components being a left front wheel bulkhead component, a right front wheel bulkhead

Art Unit: 3612

component, a left rear wheel bulkhead component, and a right rear wheel bulkhead component, each said wheel bulkhead component including two rigid layers and an elastomeric layer sandwiched therebetween, said left front wheel bulkhead component adjoining said left floor component at said left floor component front end, said right front wheel bulkhead component adjoining said right floor component at said right floor component front end, said left rear wheel bulkhead component adjoining said left floor component at said left floor component rear end, said right rear wheel bulkhead component adjoining said right floor component at said right floor component rear end, each said wheel bulkhead component being disposed at an angle with respect to the adjoining said floor component (Figure 4).

Allowable Subject Matter

10. Claims 21-28 are allowed.
11. Claims 3 and 18-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
12. Claims 14-16 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.
13. Claims 4-11 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hilary Gutman whose telephone number is 571-272-6662.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Dayoan can be reached on 571-272-6659. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

16. **Any response to this action should be mailed to:**


Assistant Commissioner for Patents
Washington, D.C. 20231

or faxed to:

(571) 273-8300, (for formal communications intended for entry)

or:

(571) 273-6662, (for informal or draft communications, please clearly label
"PROPOSED" or "DRAFT").


Hilary Gutman

September 3, 2005

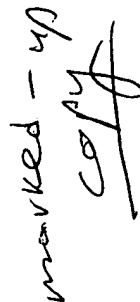


FIG. 11